PRE-APPEAL BRIEF REQUEST FOR REVIEW	Docket Number (Optional) 247079-00191USPT

	Application Number 10/616,459	Filed July 9, 2003
	First Named Inventor Chad A. Ryan	
	Art Unit 3714	Examiner Omkar A. Deodhar

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
        Note: No more than five (5) pages may be provided.

I am the

☐ applicant /inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

Signature

☒ attorney or agent of record.

Registration number   36,028

Wayne L. Tang
Typed or printed name

☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34. _____

(312) 425-8641
Telephone number

March 6, 2008
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of   1   forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	10/616,459
Applicants	:	Chad A. Ryan
Filed	:	July 9, 2003
Title	:	Gaming Machine Having Targeted Run-Time Software Authentication
TC/A.U.	:	3714
Examiner	:	Omkar A. Deodhar
Docket No.	:	247079-00191USPT
Customer No.	:	70243

MS After Final
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
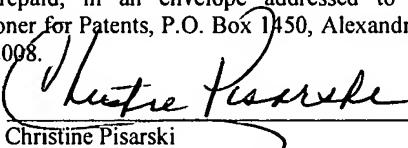
PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

A Final Office Action was mailed on November 8, 2007. The shortened statutory period for response is three months from the mailing date, i.e., by February 8, 2008, and thus, this response is being filed with a one month extension. This Pre-Appeal Brief Request for Review is being filed together with a Notice of Appeal and appropriate fee.

REMARKS/ARGUMENTS

Claims 1, 3-10 and 32-50 remain in the application for further prosecution. The Final Office Action made various procedural objections to the claims.[1] Claims 1, 32, 44 and 47 are

---

[1] The Final Office Action objected to claim 49 as improperly referencing claim 4 and the misnumbering of the claims as claim 32 was listed as canceled when claim 32 was actually the first of a set of new claims added in the last Amendment. Applicant will submit an amendment in response to the next office action to amend claim 49 to properly reference claim 47, note that claim 32 is still pending, and claims 11-31 should have been canceled in the previous amendment.

independent claims directed toward various aspects of an authentication method and system. These claims generally relate to a more efficient and faster method of authentication that determines whether a software block is executable code or graphics data and only authenticates the executable code. Rapid authentication is particularly desirable in the wagering game industry where game software must be authenticated before play. Wagering game players do not wish to wait long periods of time for the authentication process before playing wagering games. The authentication is accelerated because only the executable code is authenticated, thus not having to wait to devote processor resources or time to authenticating larger graphics data.

Currently claims 1 and 3-10 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Publication No. 2003/0188231 A1 ("Cronce"). Claims 32-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2003/0188231 A1 ("Cronce") in view of U.S. Patent No. 6,487,301 ("Zhao").

A. Cronce Relates To An Entirely Different Authentication Problem Than The Present Claims

Cronce relates generally to a security system that protects software from attacks by scattering the parts of a validation algorithm throughout the protected software. Cronce addresses the problem of a standard authentication scheme that is locally situated and therefore can be circumvented by a hacker studying the code. (Abstract). Unlike the present claims, Cronce protects the entirety of the software but does not determine whether a code block is either executable code or graphics data in order to speed authentication of more critical parts, such as executable code, than less essential parts, such as graphics data. Cronce is more secure in certain aspects because it thwarts hackers that could examine the code to break the authentication algorithm, but Cronce does not speed authentication in comparison to the methods and systems in the present claims. Cronce does review a software block to determine whether it contains the scattered checksum algorithm, but does not determine whether the software block is either executable code or graphics data. Cronce teaches authenticates the entirety of the software and thus does not disclose or suggest authenticating only parts of the software based on the type of code in each software block.

B. **Claims 1, 32 and 40 Are Allowable Over Cronce Because They Require Determination of Whether The Next Predetermined Amount of Data is Executable Code Or Graphic Data**

Claims 1, 32 and 40 are allowable over Cronce because these claims require "determining if the next predetermined amount of data is executable code or graphic data." As explained above, Cronce only determines whether a software block relates to the validation algorithm, but does not determine any other characteristics of the software to be validated. The Office Action cites Fig. 3b, element 310, for teaching determining if the next amount of data is executable code or graphics data. (p. 3). Applicant respectfully disagrees that this or any other section of Cronce discloses determining whether the next amount of data is executable code or graphics data. Fig. 3b in Cronce generally relates to a process used by a tool to prepare a modified application for a run-time checksum validation. The tool scatters the checksum algorithm in the software itself. (paragraphs 28 and 39). Element 310 is described as where the prepared software application is received for processing. (paragraph 30). The routine simply checks for exported symbols for the start of the blocks to be protected by the checksum algorithm. (paragraph 30). There is nothing in this paragraph or any other description of Fig. 3b to indicate that the software is checked to determine whether it is executable code or graphics data. Indeed, as long as the software block has a corresponding checksum, it is authenticated whether it is executable code or graphics data. (paragraph 51).

C. **Claim 1 Is Separately Allowable Because It Selectively Authenticates Executable Code**

Claim 1 also requires that if the predetermined amount of code is graphic data, the next predetermined amount of data is read and if the next predetermined amount of data is executable code, then authenticating said executable code. Cronce also does not disclose these elements as Cronce discloses authenticating the entire code ("each block"), regardless of the code type. (paragraph 51). The Office Action references paragraph 30 of Cronce stating that "data is received for processing by a wrapping tool. This tool detects symbols that define the start and end of data blocks to be subject to runtime checksum validation." (p. 3). As explained above, nothing in this paragraph relates to authenticating the software block if the block is executable data and reading the next block if it is not executable data. In fact, as long as the block is not part of the checksum algorithm, it is validated and therefore Cronce actually teaches away from

claim 1 which requires that non-executable blocks of code are not authenticated. For this reason and the reason in the above section, claim 1 and its dependents are allowable over Cronce.

D.   Claims 32, 40 and 47 Are Separately Allowable over Cronce and Zhao Because They Do Not Authenticate Graphics Data Separately From Executable Code

With regard to claim 32, the Office Action has combined Cronce with the graphic data authentication disclosed by Zhao. (p. 6). Initially such a combination would not be made by one of ordinary skill in the art as Cronce (and the current application) relate to authentication of digital data (software) while Zhao relates to an entirely different authentication issue, namely authenticating a physical graphic such as a fax or a printed document. Zhao assumes that an image is scanned into an analog form and includes a watermark that is transferred in the scan. (Col. 7, ll. 25-47). Zhao is not directed toward authentication of the actual electronic data.

However, even combining Zhao with Cronce would not disclose nor suggest authenticating executable code and only authenticating graphics data when a predetermined condition has been met as required by claim 32. Even assuming Zhao discloses a method of authenticating graphics data in a software program, Zhao is only limited to authentication of the physical graphic itself. As explained above, Cronce does not disclose or suggest authenticating executable code and only authenticating graphics data under certain conditions. Cronce discloses authenticating all of the code at the same time with the same authentication routine, regardless whether the code is executable code or graphics data. Claim 32 and its dependents are therefore allowable over any combination of Cronce and Zhao.

Similarly, claim 40 is allowable over Cronce and Zhao. Cronce does not disclose authenticating the executable code and authenticating graphics data only if a predetermined condition is met as required by claim 40. The combination of Cronce and Zhao would not suggest or teach such an element because Cronce would simply authenticate the software regardless of whether it is executable code or graphics data. Claim 40 and its dependents are therefore allowable over the cited references.

Claim 47 requires "authenticating said executable code at a first frequency and authenticating said graphics data at a second frequency, said first frequency being greater than said second frequency." Neither Cronce nor Zhao disclose or suggest authenticating parts of the code at different frequencies. Zhao is silent as to authentication of executable code or the

frequency at which different types of code are authenticated. Cronce actually teaches away from authenticating different code types of a software program at different frequencies as Crone discloses authenticating all parts of the program at the same time, i.e. at the same frequency. (paragraph 51). Claim 47 and its dependents are therefore allowable over the cited references.

Conclusion

It is Applicant's belief that all of the pending claims 1-10 and 32-50 are allowable over any of cited references and actions towards that effect is respectfully requested. If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the number indicated.

Respectfully submitted,

Date: March 6, 2008
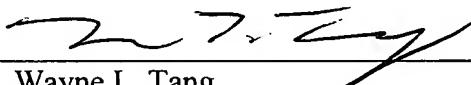
Wayne L. Tang
Reg. No. 36,028
NIXON PEABODY LLP
161 N. Clark Street, 48th Floor
Chicago, Illinois 60601-3213
(312) 425-3900
Attorney for Applicants